CLAIMS

What is Claimed is:

1. An electrochemical device for cooperating with an electronic meter capable of holding the device, moving the device and measuring electrical properties between at least two electrically conductive electrodes, comprising:

a carrier of molded insulative material supporting a plurality of electronic sensors thereon,

each sensor having:

at least two spaced apart electrically conductive electrodes with at least a portion thereof embedded in the insulative material;

at least one contact for electronic communications with the meter;

a fluid sample receiving portion; and,

one or more substances on at least one of the electrodes to change the electrical properties between the electrodes upon reacting with the fluid sample.

2. The electrochemical device of Claim 1 wherein the electrodes are substantially molded into the insulative material of the carrier.

3. The electrochemical device of Claim 1 wherein the carrier is a substantially circular disc.

4. The electrochemical device of Claim 1 wherein the electronic meter moving the device is by rotating the carrier.

5. The electrochemical device of Claim 1 wherein the plurality of sensors are fixed within the carrier and not removable from the carrier.

6. The electrochemical device of Claim 1 wherein the sensors are radially spaced from one another spoking outwardly from positions adjacent the center of the disc.

7. The electrochemical device of Claim 1 wherein the fluid sample receiving portion is a capillary inlet adapted to draw the fluid sample into the sensor upon contact with the fluid sample, the plurality of inlets being along or adjacent a periphery of the disc.

8. The electrochemical device of Claim 1 wherein the electrodes are one of either conductive wires or formed from a conductive plate.

9. The electrochemical device of Claim 8 wherein the electrodes formed from a conductive plate are stamped into a specific pattern.

10. The electrochemical device of Claim 1 wherein at least one electrode is coated with a conductive material different than the composition of the electrode.

11. The electrochemical device of Claim 1 further including

means for detecting when a sufficient amount of the fluid sample has been received by the device selected from the group consisting of an electrical indication and a visual indication.

12. The electrochemical device of Claim 11 wherein the means for detecting when a sufficient amount of fluid sample has been received includes a depressurization vent formed in the sensor, in communication with a reaction zone, and allowing for fill detection to be made visually.

13. The electrochemical device of Claim 12 wherein the reaction zone is in communication with a capillary inlet.

14. The electrochemical device of Claim 11 wherein the means for detecting when a sufficient amount of fluid sample has been received includes a reaction zone in communication with a capillary inlet, the reaction zone having an interior surface and at least a portion of the at least two electrodes exposed therein for contacting the fluid sample drawn therein to activate the meter to indicate sufficient fill.

15. The electrochemical device of Claim 11 wherein the means for detecting when a sufficient amount of fluid sample has been received includes a cavity forming a reaction zone in the sensor, the reaction zone having at least a portion of the at least two electrodes exposed therein for contacting the fluid sample drawn therein to activate the meter to indicate sufficient fill.

16. An electrochemical device for cooperating with an electronic meter capable of holding the device, moving the device and measuring electrical properties between at least two electrically conductive electrodes, comprising:

a carrier of molded insulative material supporting a plurality of electronic sensors thereon,

each sensor having:

at least two pieces, a body and an end cap, attachable to one another;

at least two spaced apart electrically conductive electrodes with at least a portion thereof embedded in the insulative material;

at least one contact for electronically communicating with the meter;

means for receiving a fluid sample; and,

one or more substances on at least one of the electrodes to change the electrical properties between the electrodes upon reacting with the fluid sample.

17. An electrochemical device for cooperating with an electronic meter capable of holding the device, moving the device and measuring electrical properties between at least two electrically conductive electrodes, comprising:

a carrier of molded insulative material supporting a plurality of electronic sensors thereon,

each sensor having:

a body having a hinge constructed therein for permitting the pivoting and connecting of a portion of the body onto itself;

at least two spaced apart electrically conductive electrodes with at least a portion thereof embedded in the insulative material;

ate least one contact for electronically communicating with the meter;

a fluid sample receiving portion; and,

one or more substances on at least one of the electrodes to change the electrical properties between the electrodes upon reacting with the fluid sample.